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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,287	01/14/2004	Stephen Oser	35015US1	4506
116 7590 07/27/2007 PEARNE & GORDON LLP 1801 EAST 9TH STREET SUITE 1200 CLEVELAND, OH 44114-3108				
			EXAMINER CASTELLANO, STEPHEN J	
			ART UNIT 3781	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/757,287

Applicant(s)

OSER ET AL.

Examiner

/Stephen J. Castellano/

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-11 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11 and 13 is/are rejected.
- 7) ☒ Claim(s) 7, 8 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claims 7, 8 and 13 are objected to as being incomplete because they depend from canceled claim 6.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-5 and 9-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original disclosure doesn't indicate rotation or pivoting of the arced elements. **This is a new matter rejection.**

Note that parts 105A and 105C are not actually identical but are similar and resemble mirror image parts. The specification sets forth that each of the three interlocking elements may be characterized by an identical shape. The shape of each element is identical to the others when this limitation is read in light of the specification.

The specification states that "the retainer ring 100 is made of at least two arced elements that are movable relative to each other ..." There is no identification of which two parts or elements (105A, 105B or 105C) are movable with respect to each other.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 7, 8 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7, 8 and 13 are indefinite because they depend from canceled claim 6.

Claims 7, 8 and 13 will not be treated with an art rejection.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 5, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Darby et al. ('411) (Darby).

Darby discloses an end closure assembly for a pressure vessel, comprising a head member (domed shaped element 39, tubular connector 55 and seal 57 made of elastomeric non-metallic material), a retainer ring (79 which can be made of fiber composite) and a securing plate (face plate 41).

The retainer ring (79) is one-piece and consist of three layers coiled and laying on top of each other and is considered to have at least two arced elements that are movable by rotation with respect to each other, a first element could be the topmost 1/3 circle portion of the ring and a second element could be the lowermost 1/3 circle portion of the ring, the middle portion representing approximately 2 1/3 revolutions would represent a movable/rotatable part allowing rotation about a horizontal axis much like a coil spring. Therefore, the first and second elements are movable/rotatable relative to each other.

The retainer ring could also be a segmented ring as stated in col. 8, line 65. The segmented ring would certainly have arced elements movable/rotatable relative to each other as evidenced by Buckley (3136230).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 5 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darby.

Darby discloses the invention except for all of the parts of the head member being non-metal. The Official notice taken in the Office action mailed July 19, 2006 that domed heads and tubular connectors of non-metal composite plastic material are well known has not been challenged. Therefore, the previous prior art admission is now being treated as admitted prior art. It would have been obvious to use non metal plastic components where corrosion and weight are of concern.

Claims 1, 4, 5 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darby in view of Brock.

This rejection is made if it is deemed that Darby doesn't disclose two arced elements movable/rotatable relative to one another.

Brock teaches various retaining rings 10 with two arced elements 13 movable/rotatable relative to each other as a hinge is apparent at the attachment of each limb 13 to a spoke 12 (see

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Fig. 1 which details the deformation of limb 13 in phantom and Fig. 7 an embodiment with a central opening. It would have been obvious to replace the retaining ring of Darby with the retaining ring 10 of Brock to provide a readily deformable ring which transforms from a conical or deformed configuration to a flattened configuration in gripping engagement (see col. 1, first paragraph).

Claims 1, 4, 5 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darby in view of Buckley.

This rejection is made if it is deemed that Darby doesn't disclose two arced elements movable/rotatable relative to one another.

Buckley teaches a retaining ring 28 with two arced elements 30 and 32 movable/rotatable relative to each other. It would have been obvious to replace the retaining ring of Darby with the retaining ring 28 of Buckley to provide easier assembly and disassembly (see Buckley col. 1, lines 29-31).

The elements are identical in shape insofar as similar elements are deemed identical in the present application. The elements are interlocked and linked, are mirror images of each other and rotate relative to each other insofar as these limitations were originally disclosed.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darby or [Darby in view of Brock] or [Darby in view of Buckley] in view of Galasso et al. (Galasso).

Darby discloses the invention except for the elliptical head member. Galasso teaches an elliptical (insofar as elliptical is shown) head member (160) in contact with an universal head member (140) and a securing plate (110). It would have been obvious to add an elliptical head member to take up the space between an universal head member and a securing plate to provide

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a tight fit and to properly support the parts within the assembly so that these parts do not deform in the presence of excessive force or pressure.

Applicant's arguments with respect to the 112, first paragraph rejection (new matter rejection) have been considered but are not persuasive. Applicant relies of Fig. 5A has a representation of three arced elements connected by pins which allow relative rotation of the individual arced elements with respect to each other. Applicant also states that one of ordinary skill in the art would have appreciated these connections as being rotatable. The examiner believes the relative skill to be low in the pressure vessel art, equivalent to a janitor, mechanic or maintenance worker. Even if a highly skilled technician or engineer were to view Fig. 5A, how could the highly skilled artisan conclude that the circles drawn at the links form a rotatable connection, they are never described as loosely fitted pins or rivets. In fact, the circles could represent a fixed pin in a pin/slot configuration allowing only translational movement. The circles could represent a fixed connection (e.g. screw, bolt or nail) wherein no relative movement occurs at the circle.

Darby is characterized as having a "one-piece" retaining ring that doesn't have separate elements. There is no language in the claim that precludes a retaining ring assembly made from one-piece. Buckley teaches three separate arced elements and has been combined with Darby to rebut any argument about separate ring elements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Castellano whose telephone number is 571-272-4535. The examiner can normally be reached on increased flexibility plan (IFP).

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen J. Castellano/
Primary Examiner
Art Unit 3727

sjc